

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP2005/003693

## A. CLASSIFICATION OF SUBJECT MATTER

Int.Cl<sup>7</sup> C12N15/09, A61K31/7088, 39/00, 45/00, 48/00, A61P37/04

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Int.Cl<sup>7</sup> C12N15/09, A61K31/7088, 39/00, 45/00, 48/00, A61P37/04

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

BIOSIS/MEDLINE/WPIDS (STN), REGISTRY/Caplus (STN)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	JP 2003-510290 A (Coley Pharmaceutical Group, Inc.), 18 March, 2003 (18.03.03), Full text & WO 2001/22990 A2 & EP 1220684 A	1-7
Y	US 2003/50268 A1 (KRIEG, A.M. et al.), 13 March, 2003 (13.03.03), Full text (Family: none)	1-7
Y	US 2003/87848 A1 (BRATZLER, R.L. et al.), 08 May, 2003 (08.05.03), Full text (Family: none)	1-7

☒ Further documents are listed in the continuation of Box C.☐ See patent family annex.

\* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&amp;" document member of the same patent family

Date of the actual completion of the international search

24 May, 2005 (24.05.05)

Date of mailing of the international search report

14 June, 2005 (14.06.05)

Name and mailing address of the ISA/

Japanese Patent Office

Authorized officer

Facsimile No.

Telephone No.

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP2005/003693

## C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	KURAMOTO, E. et al., "Oligonucleotide Sequences Required for Natural Killer Cell Activation", Jpn.J.Cancer Res., (1992), Vol.83, pages 1128 to 1131, full text	1-7
Y	WO 2004/000351 A1 (CYTOS BIOTECHNOLOGY AG.), 31 December, 2003 (31.12.03), Full text (Family: none)	5-7
A	KRUG, A. et al., "Identification of CpG oligonucleotide sequences with high induction of IFN-alpha/bata in plasmacytoid dendritic cells", Eur.J.Immunol., (2001), Vol.31, pages 2154 to 2163	1-7

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP2005/003693

**Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)**

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:  
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

**Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)**

This International Searching Authority found multiple inventions in this international application, as follows:

Although it appears that the matter common to all of claims 1 to 7 resides in "immune stimulating oligonucleotides comprising Gn- (G/C)ACGATCGT(G/C)-G(10-n): n=1 to 9)", it is clarified that an immune stimulating oligonucleotide G4-GACGATCGTG-G6, which is one of "immune stimulating oligonucleotides comprising Gn- (G/C)ACGATCGT(G/C)-G(10-n): n=1 to 9)", is not novel because of having been described in document (KRUG, A. et al., "Identification of CpG oligonucleotide sequences with high induction of IFN-alpha/beta in plasmacytoid dendritic cells", Eur. J. Immunol., (2001), Vol. 31, pp. 2154-2163) disclosed in the description as prior art.

Such being the case, the inventions according (continued to extra sheet)

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims: it is covered by claims Nos.:

The parts relating to an immune stimulating oligonucleotide comprising the base sequence of SEQ ID NO: 7 in claims 1 to 7.

**Remark on Protest**

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP2005/003693

Continuation of Box No.III of continuation of first sheet (2)

to claims 1 to 7 are divided into eight groups of inventions respectively having special technical features in "immune stimulating oligonucleotides comprising the base sequences of SEQ ID NOS:7, 1 to 6 and 8".